

## **IN THE CLAIMS**

1-9. (canceled)

10. (currently amended) A method of ~~preventing~~ reducing neuronal cell death in a mammal, comprising:

administering to the mammal a nucleic acid molecule comprising a coding sequence for a neuronal marker (NM) protein selected from the group consisting of: ~~NM~~ androgen binding protein; plasma kallikrein (rPK); Lim-2; embryonic motor neuron topographic organizer, HOMEODOMAIN PROTEIN LIM-2 (LIM/HOMEODOMAIN PROTEIN LHX5).; DCC; netrin receptor; immunoglobulin gene superfamily member; former tumor suppressor protein candidate; N-myc proto-oncogene protein; M-phase inducer phosphatase 2 (MPI2); cell division control protein 25 B (CDC25B); von ebner's gland protein 2; VEG protein 2; VEGP2 + von ebner's gland protein 1; VEG protein 1; VEGP1; VEGP; synaptobrevin 1 (SYB1); vesicle-associated membrane protein 1 (VAMP1); 3-methylcholanthrene-inducible cytochrome P450 (P450MC); cytochrome P450 1A1 (CYP1A1); cytochrome P450 VII (CYP7); cholesterol 7-alpha-monooxygenase; cholesterol 7-alpha-hydroxylase; cyclic nucleotide-activated channel, olfactory; cytochrome P450 2E1 (CYP2E1); P450-J; P450RLM6; high affinity L-proline transporter; neuronal acetylcholine receptor protein alpha-3 chain precursor; sodium channel I; voltage-dependent L-type calcium channel alpha 1C subunit (CACNA1); cardiac muscle L-type calcium channel alpha 1 polypeptide isoform 1 (CCHL1A1); rat brain class C (RBC); CACH2; CACN2; ATPase, hydrogen-potassium, alpha 2a subunit; sodium channel, amiloride sensitive, alpha subunit; SCNEA; alpha NACH; SCNN1A; RENAC; ; cardiac specific sodium channel alpha subunit; potassium channel protein CDRK; neuronal acetylcholine receptor protein alpha 5 subunit precursor (CHRNA5; ACRA5); sodium channel SHRSPHD, gamma subunit, epithelial;

sodium channel protein 6 (SCP6); renal organic anion transporter (ROAT1) + multispecific organic anion transporter (OAT1); neuronal acetylcholine receptor protein alpha 6 subunit precursor (CHRNA6; ACRA6); purinergic receptor P2X3, ligand-gated ion channel; calcium channel, alpha 1 beta; sodium channel, beta 1 subunit; neuronal acetylcholine receptor protein alpha 7 subunit precursor (CHRNA7; ACRA7); neuronal nicotinic acetylcholine receptor alpha 2 subunit; proton gated cation channel drasic; sensory neuron specific; channel-inducing factor precursor (CHIF); corticosteroid-induced protein; MYELIN BASIC PROTEIN S (MBP S); organic cation transporter 2 (OCT2); ASIC1 proton gated cation channel; glycine receptor alpha 3 subunit precursor (GLRA3); voltage-gated K<sup>+</sup> channel protein; RK5; potassium channel protein; voltage-activated calcium channel alpha-1 subunit (RBE-II); nickel-sensitive T-type calcium channel alpha-1 subunit; inward rectifier potassium channel subfamily J member 2 (KCNJ2); RBL-IRK1; eek proto-oncogene, protein tyrosine kinase, eph/elk-related; prostaglandin D2 receptor; activin receptor type I precursor (ACVR1; ACTR1); serine/threonine-protein kinase receptor R1 (SKR1); TGF-B superfamily receptor type I (TSR-I); ACVRLK2; calcitonin receptor precursor (CT-R); C1A/C1B; prostaglandin E2 receptor EP2 subtype (PGE receptor EP2 subtype; PTGER2); prostanoid EP2 receptor; NEUREXIN I-BETA PRECURSOR,Non-processed neurexin I-beta Synaptic cell surface proteins + NEUREXIN I-ALPHA PRECURSOR,Non-processed neurexin I-alpha Synaptic cell surface proteins; gastrin-releasing peptide precursor (GRP); neuromedin C; serotonin receptor; 5-hydroxytryptamine 6 receptor (5-HT-6); ST-B17; possesses high affinity for tricyclic psychotropic drugs; platelet activating factor receptor; alpha 2B adrenergic receptor (ADRA2B); alpha 2B adrenoceptor; VASOACTIVE INTESTINAL POLYPEPTIDE RECEPTOR 2 PRECURSOR (VIP-R-2) (PITUITARY ADENYLATE CYCLASE ACTIVATING POLYPEPTIDE TYPE III

RECEPTOR) (PACAP TYPE III RECEPTOR) (PACAP-R-3).; transforming growth factor beta 3 (TGF-beta3); antiproliferative growth factor; vasopressin V1b receptor; prostaglandin E2 receptor EP4 subtype; alpha 2C adrenergic receptor (ADRA2C); alpha 2C adrenoceptor; vasopressin/arginine receptor, V1a; prostaglandin F2 alpha receptor; growth hormone secretagogue receptor 1 (GHSR); cholecystokinin receptor; NMDAR2A N-METHYL-D-ASPARTATE RECEPTOR SUBUNIT; P2U PURINOCEPTOR 1 (ATP RECEPTOR) (P2U1) (PURINERGIC RECEPTOR).; estrogen receptor beta (ER-beta); ESR2; NR3A2; kappa-type opioid receptor (KOR-1); lutropin-choriogonadotropic hormone receptor; beta 1 adrenergic receptor (ADRB1R); 5-hydroxytryptamine (serotonin) receptor 1B; 5-HT1B; adrenergic receptor, beta 2; muscarinic acetylcholine receptor M3 (MACHR); B1 bradikinin receptor; mu opioid receptor (MUOR1); mu-type opioid receptor (MOR-1); opioid receptor B; serotonin 5HT2 receptor; somatostatin receptor 2; melatonin receptor; somatostatin receptor; galanin receptor 1; neuromedin B receptor; transmembrane receptor UNC5H1.; pancreatic polypeptide receptor PP1; interleukin-2 (IL-2); somatostatin; luteinizing hormone, alpha; mast cell protease 1 precursor (RMCP-1); secretory protein probasin (M-40); E-selectin precursor; endothelial leukocyte adhesion molecule 1 (ELAM-1); leukocyte-endothelial cell adhesion molecule 2 (LECAM2); CD62E; Protein kinase C-binding protein beta15; RING-domain containing; kidney band 3 anion exchange protein; SLC4A1; AE1; L-selectin precursor; lymph node homing receptor; leukocyte adhesion molecule-1 (LAM-1); LY-22; lymphocyte surface MEL-14 antigen; leukocyte-endothelial cell adhesion molecule 1 (LECAM1); CD62L; Wilms' tumor protein (WT1); tumor suppressor; CD28, T-cell surface antigen; c-fgr proto-oncogene ; CD3, gamma chain; cathepsin E; S-myc proto-oncogene protein; myc-related ; G protein-activated inward rectifier potassium channel 4 (GIRK4); inward rectifier potassium channel subfamily J member 5

(KCNJ5); heart KATP channel; KATP-1; cardiac inward rectifier (CIR); KIR3.4; fructose (glucose) transporter; sodium channel protein 6 (SCP6); sodium channel, beta 1 subunit; sodium-hydrogen exchange protein-isoform 2 (NHE-2); PMCA; ATP2B2; calcium-transporting ATPase plasma membrane (brain isoform 2; EC 3.6.1.38); calcium pump; ATPase, sodium/potassium, gamma subunit; G protein-activated inward rectifier potassium channel 1 (GIRK1); inward rectifier potassium channel subfamily J member 3 (KCNJ3); KGA; KGB1; KIR3.1; proton gated cation channel drasic; sensory neuron specific; sodium channel 2, brain; ATPase, copper-transporting, Menkes protein; channel-inducing factor precursor (CHIF); corticosteroid-induced protein; synaptotagmin II; carbonic anhydrase 4; calcitonin receptor precursor (CT-R); C1A/C1B; vasopressin V2 receptor; 5-hydroxytryptamine (serotonin) receptor 1B; 5-HT1B; gamma-aminobutyric acid receptor alpha 4 subunit precursor (GABA(A) receptor; GABRA4); vitamin D3 receptor (VDR); 1,25-dihydroxyvitamin D-3 receptor; NR1I1; muscarinic acetylcholine receptor M5 (CHRM5); somatostatin receptor; galanin receptor 1; granulocyte-macrophage colony-stimulating factor (GM-CSF); colony- stimulating factor (CSF); guanylyl cyclase (membrane form); parathyroid hormone receptor PTH2; galanin receptor 2; 5-hydroxytryptamine (serotonin) receptor 2B; guanine nucleotide-binding protein G(I)/G(S)/G(O) gamma-7 subunit (GNG7; GNGT7); adenylyl cyclase 4; protein kinase C-binding protein nel homolog 1; phospholipase C beta 3 (PLC-beta 3); tissue-type plasminogen activator (t-PA); NVP; neural visinin-like Ca<sup>2+</sup>-binding protein , VISININ-LIKE PROTEIN 1 (VILIP-1) (NEURAL VISININ-LIKE PROTEIN 1) (NVL-1) (NVP-1) (21 KD CABP).; T-cell receptor CD3 zeta subunit; P-selectin precursor; granule membrane protein 140 (GMP-140); PADGEM; CD62P; leukocyte-endothelial cell adhesion molecule 3 (LECAM3); T-cell receptor gamma subunit; kidney band 3 anion exchange protein; SLC4A1; AE1; L-selectin precursor; lymph node

homing receptor; leukocyte adhesion molecule-1 (LAM-1); LY-22; lymphocyte surface MEL-14 antigen; leukocyte-endothelial cell adhesion molecule 1 (LECAM1); CD62L; myelin P0 protein precursor; MPZ; MAL; T-lymphocyte maturation-associated protein; myelin protein MVP17; ErbB3 EGF receptor-related proto-oncogene; HER3; CD 30L receptor; lymphocyte activation antigen CD30; Ki-1 antigen; CD30 precursor; zinc transporter (ZnT-1); CCHB3; calcium channel (voltage-gated; DIHYDROPYRIDINE-SENSITIVE L-TYPE, CALCIUM CHANNEL BETA-3 SUBUNIT.; water channel aquaporin 3 (AQP3); 3-methylcholanthrene-inducible cytochrome P450 (P450MC); cytochrome P450 IA1 (CYPIA1); sodium/potassium-transporting ATPase beta 1 subunit (ATP1B1); glucose transporter 3; ATP-sensitive inward rectifier potassium subfamily J member 8 (KCNJ8); UKATP-1; ATP-sensitive inwardly rectifying K<sup>+</sup> channel KIR6.1; RIM; Rab3 effector in synaptic-vesicle fusion; neuronal acetylcholine receptor protein alpha-3 chain precursor; purinergic receptor P2X5, ligand-gated ion channel; sodium channel I; renal organic anion transporter (ROAT1) + multispecific organic anion transporter (OAT1); neuronal acetylcholine receptor protein alpha 6 subunit precursor (CHRNA6; ACRA6); sodium channel, beta 1 subunit; sodium-hydrogen exchange protein-isoform 2 (NHE-2); PMCA; ATP2B2; calcium-transporting ATPase plasma membrane (brain isoform 2; EC 3.6.1.38); calcium pump; fibrinogen beta subunit (FGB); sulfonylurea receptor (SUR); glycine receptor alpha 3 subunit precursor (GLRA3); multidrug resistance protein 2 (MDR2); P-glycoprotein (PGY2); potassium channel, voltage gated, KV3.4; RAW3; KCNC4; sodium/chloride cotransporter, thiazide sensitive; synaptosomal associated protein 25; SNAP-25; SNAP; SNAP25; SUP; calcitonin receptor precursor (CT-R); C1A/C1B; gamma-aminobutyric acid (GABA-A) receptor, beta 1 subunit; NEUREXIN I-BETA PRECURSOR,Non-processed neurexin I-beta Synaptic cell surface proteins + NEUREXIN I-ALPHA PRECURSOR,Non-

processed neurexin I-alpha Synaptic cell surface proteins; alpha 2B adrenergic receptor (ADRA2B); alpha 2B adrenoceptor; neuropeptide Y receptor type 1; prostaglandin E2 receptor EP4 subtype; alpha 2C adrenergic receptor (ADRA2C); alpha 2C adrenoceptor; c-ErbA oncogene; thyroid hormone receptor alpha-1 (THRA1); gamma-aminobutyric acid receptor alpha 2 subunit precursor (GABA(A) receptor; GABRA2); P2Y PURINOCEPTOR 6 (P2Y6); glutamate receptor 1 precursor (GluR-1); GluR-A; GluR-K1; gamma-aminobutyric acid receptor alpha 3 subunit precursor (GABA(A) receptor; GABRA3); NMDAR2A N-METHYL-D-ASPARTATE RECEPTOR SUBUNIT; P2U PURINOCEPTOR 1 (ATP RECEPTOR) (P2U1) (PURINERGIC RECEPTOR).; 5-hydroxytryptamine (serotonin) receptor 1B; 5-HT1B; glycine receptor, alpha 2A subunit, inhibitory; parathyroid hormone receptor PTH2; 5-hydroxytryptamine 5A receptor (5HT5A; HTR5A); serotonin receptor; REC17; acetylcholine receptor alpha; brain natriuretic peptide (BNP); 5-kDa cardiac natriuretic peptide; ISO-ANP; luteinizing hormone, alpha; cocaine/amphetamine-induced rat transcript, CART; protein kinase C-binding protein nel homolog 1; 14-3-3 protein eta; PKC inhibitor protein-1; KCIP-1; plectin; NVP; neural visinin-like Ca<sup>2+</sup>-binding protein , VISININ-LIKE PROTEIN 1 (VILIP-1) (NEURAL VISININ-LIKE PROTEIN 1) (NVL-1) (NVP-1) (21 KD CABP).; syndecan 3; ras-GTPase-activating protein (GAP); ras p21 protein activator; p120GAP; interleukin-6 receptor beta chain; membrane glycoprotein gp130; prostatic secretory protein probasin (M-40); A-raf proto-oncogene; prothymosin-alpha (PTMA); cadherin 6 precursor; kidney-cadherin (K-cadherin); neurofibromin; neurofibromatosis protein type I (NF1); GTPase stimulatory protein; c-H-ras proto-oncogene; transforming G-protein p21; HSP84; HSP90-beta; heat shock 90kD protein; Neural adhesion molecule F3, RAT NEURAL ADHESION MOLECULE F3, COMPLETE CDS.; BIG-1 PROTEIN PRECURSOR; neural cell adhesion protein; neurite

outgrowth-promotor; potassium channel protein; KSHIIIA3; ATP-sensitive inward rectifier potassium channel subfamily J member 1 (KCNJ1); KAB-1; KIR1.1; ROMK1; Band 3 (B3RP3), 3 Cl-HCO<sub>3</sub>-anion exchanger; voltage-gated potassium channel protein KV1.1; RBK1; RCK1; KCNA1; potassium channel, inward rectifier 9; taurine transporter; neuronal acetylcholine receptor protein alpha-3 chain precursor; sodium channel I; potassium channel protein CDRK; neuronal acetylcholine receptor protein alpha 6 subunit precursor (CHRNA6; ACRA6); calcium channel, alpha 1 beta; sodium channel, beta 1 subunit; PMCA; ATP2B2; calcium-transporting ATPase plasma membrane (brain isoform 2; EC 3.6.1.38); calcium pump; 17-kDa ubiquitin-conjugating enzyme E2 (UBE2B); ubiquitin-protein ligase; ubiquitin carrier protein; HR6B; synaptosomal associated protein 25; SNAP-25; SNAP; SNAP25; SUP; 67-kDa glutamic acid decarboxylase (GAD67); GAD1; eek proto-oncogene, protein tyrosine kinase, eph/elk-related; D(1A) DOPAMINE RECEPTOR; growth hormone receptor precursor (GH receptor; GHR); serum-binding protein; NMDAR2A N-METHYL-D-ASPARTATE RECEPTOR SUBUNIT; 5-hydroxytryptamine (serotonin) receptor 1B; 5-HT1B; thyroid hormone beta receptor; c-erbA-beta; gamma-aminobutyric acid (GABA-A) receptor, beta 3 subunit; glutamate receptor 2 precursor (GLUR-2; GLUR-B; GLUR-K2); glutamate receptor 4 precursor (GLUR-4; GLUR-D); cannabinoid receptor 1, neuronal; neuromedin K receptor (NKR); neurokinin B receptor; NK-3 receptor (NK-3R); GABA-A receptor gamma-2 subunit precursor; galanin receptor 2; insulin-like growth factor binding protein 1 precursor (IGFBP-1; IBP-1); presomatotropin; protein kinase C beta-I type (PKC-beta I) + protein kinase C beta-II type (PKC-beta II); guanine nucleotide-binding protein G(O) alpha subunit (GNAO; GNA0); guanine nucleotide-binding protein G(I) alpha 1 subunit (GNAI1); adenylate cyclase-inhibiting G alpha protein; serine/threonine kinase PCTAIRE2 (PCTK2); protein kinase C-binding protein nel homolog 1;

PKI-alpha; cAMP-dependent protein kinase inhibitor (muscle/brain form); 14-3-3 protein eta; PKC inhibitor protein-1; KCIP-1; and NVP; neural visinin-like Ca<sup>2+</sup>-binding protein, VISININ-LIKE PROTEIN 1 (VILIP-1) (NEURAL VISININ-LIKE PROTEIN 1) (NVL-1) (NVP-1) (21 KD CABP), whereby neuronal cell death in the mammal is reduced ~~inhibited or prevented~~.

11. (canceled)

12. (currently amended) The method of claim 10 ~~or 11~~ wherein the subject has optic nerve degeneration.

13. (currently amended) The method of claim 10 ~~or 11~~ wherein the subject has Alzheimer's disease.

14. (currently amended) The method of claim 10 ~~or 11~~ wherein the subject has diabetic retinopathy.

15. (currently amended) The method of claim 10 ~~or 11~~ wherein the subject has Huntington's disease.

16. (currently amended) The method of claim 10 ~~or 11~~ wherein the subject has spinal cord injury.

17. (currently amended) The method of claim 10 ~~or 11~~ wherein the subject has Parkinson's disease.

18. (currently amended) The method of claim 10 ~~or 11~~ wherein the subject has glaucoma.

19. (currently amended) The method of claim 10 ~~or 11~~ wherein the subject has age-related macular degeneration.

20-53. (canceled)